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Approved For Release 2006/02/01 : CIA-RDP83-00415R000100060004-9

SECRET CONTROL
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16 August 1946

Country: Germany

Subject: Details of the Russian PE-2 Bomber and Interceptor

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1. The Russian bomber and interceptor PE-2 is a twin-engine, all metal, low-wing monoplane with a small wing span. It has a twin rudder; the landing gear may be retracted. It develops medium speed and can carry a few medium sized bombs over short distances. The PE-2 carries a crew of three.

Distinguishing Marks

Overall length:	12.66 meters
Wing span:	17.16 meters
Wing area:	40.5 square meters
Dead weight:	5,870 kg.
Useful load:	1,830 kg.; maximum: 2,650 kg.
Load per unit surface:	190 kg. per square meter.
Maximum speed:	540 km. per hr. at an altitude of 5,000 meters; 506 km. per hr. at 2,000 meters. Speed at minimum altitude: 460 km. per hr. Speed with one engine at altitude of 1,500 meters: 280-300 km. per hr.
Cruising speed:	428 km. per hr.
Landing speed:	140 km. per hr.
Rate of climb:	Up to 3,000 meters: 3.5 minutes Up to 5,000 meters: 7 minutes Up to 1,000 meters with one engine: 7 minutes.

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Ceilings	9-10,000 meters
Time ranges	2.5 to 3 hours.
Ranges	1,800-1,900 km.
Diving speed:	With flaps: 600 km. per hr. Without flaps: 720 km. per hr. The loss of altitude of the pull-out is 600-900 meters.
Diving angles	50-70 degrees.

Engine and Accessories

2. Two M-105-R gasoline engines, watercooled; 12 cylinders in 60 degree V shape, with an electrically controlled supercharger.

Shafts	148 mm.
Strokes	170 mm.
Displacement of cylinders	35 liters.
Rate of compression:	1 to 7
Overall length:	2,027 mm.
Overall height:	960 mm.
Overall width:	777 mm.
Dead weight:	575 kg.
Performance:	Approximately 1,000 hp.
Performance per kg: Performance per l Performance per liter:	0.523 kg. per hp. 32 hp. per liter.
Gasoline:	92 octane.

3. The supercharger has two blades: 1 to 7.85 and 1 to 10.

4. The propeller has a ratio of 1.694 to a liter. It has three Hirsch-61 blades with a pitch adjustment of 35 degrees (electrically operated). Each engine has one ial and two water coolers.

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5. During flight, the plane carries approximately 1,900 liters of fuel, distributed as follows:

Main tanks	Up to 518 liters	
8 wing tanks:	Two each containing	107.2 liters.
"	" "	143.2 "
"	" "	180 "
"	" "	93 "

In addition, there are two reserve tanks of 10.5 liters each. The FB-2 carries 180 liters of lubricants.

Electrical Equipment

6. Eighteen Servo motors are used for flaps, trimming tabs, radiator adjustment, etc. Four are used for the water cooler, two for air coolers, two for propeller pitch adjustment, two for supercharger ratio, four for the trimming tabs, and one each for dropping and retracting undercarriage, driving brakes, landing brakes. Added to this is a hydraulic installation.

Armament

7. In Condition I: 4 machine guns of 7.62 mm.
In Condition II: 2 machine guns of 7.62 mm., and 2 machine cannon of 12.7 mm.
In Condition III: 4 machine guns of 7.62 mm., and 2 machine cannon of 12.7 mm.

8. The sighting mechanism of the rear gun is new. The gunner does not crouch, but assumes a prone position. He moves the machine gun downwards in a vertical angle. This cocks two springs which can return it to its original position. The optical rear sight mounted over the machine gun consists of two tubes which are inclined to 110 degrees. Field of view is 40-42 degrees to each side. Rear sight weighs 3 kg. The machine gun is operated and set by two circular hand levers.

Armor

9. Armor is conventionally placed 6 to 9 mm. armor plate.

Bomb Load

10. The bomb load varies between 500 and 1,000 kg. It is dispersed, partially inside the fuselage or engine nacelles and partially outside, as follows:

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Bombs	Bombs	Bomb Load	Total Weight
6	4	90 kg.	500 kg.
6	4	200 kg.	1,000 kg.
-	4	150 kg.	600 kg.
-	4	200 kg.	800 kg.
-	4	250 kg.	1,000 kg.
-	2	500 kg.	1,000 kg.

Performance Data

11. For the PB-2 equipped with the 105-R engines:

	Sea Level	Climbing Speed		Maximum Performance	
Altitude (meters)	0	2,000	4,000	2,000	4,000
Performance (horse-powers)	1,000	900	945	1,100	1,050
Revolutions per minute	2,600	2,600	2,600	2,700	2,700
Booster pressure (atm)	1.20	1.24	1.24	1.235	1.235

Future Development

12. A future development of the PB-2 will call for more powerful R-82 engines with 14 cylinders each and a performance of 1,600 hp.

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